

### Abstract

The present invention relates to the deep rolling apparatus (8) of a deep rolling machine 1 for crankshafts (3) in which two arms (9, 10) across from each other support a deep rolling head (13) or a support roller head (14). The support roller head (14) has two support rollers (21, 22) with parallel axes and the deep rolling head (13) has two work rollers (23, 24) entering the radii or fillets of the main bearing or crank pin journals or journals of the crankshafts (3). In one embodiment of the deep rolling apparatus (8) in scissor-like construction an axial guide roller (27) is provided on the deep rolling head (13) and is centered relative to the deep rolling head (13), its axis of rotation being perpendicular to the axis of rotation of the crankshaft (3). The axial guide roller (27) has a diameter that is slightly smaller than the distance between two oil collars (25, 26) of a main crank pin journal (5) of the crankshaft.